BONDAR', A.D.; YEMLYANINOV, A.S.; KLYUCHAREV, A.P.; LISHENKO, L.G.; MEDYANIK, V.N.; NIKOLAYCHUK, A.D.; SHALAYEVA, O.Ye.

Making metal films of isotopes. Prib. i tekh. eksp. no.3:134-136 My-Je '60. (MIRA 14:10)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Metallic films)

SHALAYEVA, R.G.

Improved technology for dressing the ores of a certain deposit.
Sbor. nauch. trud. Gintsvetmeta no.19:176-180 '62.
(MIRA 16:7)

(Sumsar region—Ore dressing)

FILIPPOV, A.P., otv.red., DEDUSENKO, Yu.M., red.; NAGORNAYA, N.K., red.; BULGAKOV, V.N., red.; SYTNIK, K.K., red.; SHALAYEVA, S.A., mlad. red.

[Operating processes in turbomachines and the stability of their elements] Rabochie protsessy v turbomashinakh i prochnost' ikh elementov. Kiev, Naukova dumka, 1965. 172 p. (MIRA 18:6)

1. Akademiya nauk URSR Kiev. Instytut mekhaniky. Khar'kovskiy filial. 2. Chlen-korrespondent AN Ukr.SSR (for Filippov).

POCHERNIKOVSKAYA, L.N., red.; SHALAYEVA, S.A., ml. red.

[Electrical networks for the conversion of measurement data] Elektricheskie tsepi dlia preobrazovaniia izmeritel'noi informatsii. Kiev, 1965. 137 p.
(MIRA 19:1)

1. Akademiya nauk URSR, Kiev.

SYTNIK, N.K., red.; SHALAYEVA, S.A., ml. red.

[Theory and elements of a system for sampling geophysical information] Teoriia i elementy sistem otbora geofizicheskoi informatsii. Kiev, Akad. nauk URSR, 1965. 163 p. (MIRA 19:1)

1. Akademiya nauk URSR, Kiev.

FLEROVA, Ye.A.; STAVROVSKIY, A.Ye.; SHALAYEVA, V.F.; YELAGIN, V.D., redaktor; PROFERANSOVA, N.V., redaktor; VOLKOV, A.P., tekhnicheskiy redaktor

[Experience in teaching biology; a collection of articles] Opyt prepodavaniia biologii; sbornik statei. Pod red. E.A.Flerovoi, A.E.Stavrovskogo i V.F.Shalaeva. Moskva, 1956. 254 p. (MLRA 9:10)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov obucheniya
(Biology--Study and teaching)

BIBIKOV, Yuriy Konstantinovich; MALYSHKIN, Viktor Fedoseyevich; SHALAYEVA, Yekaterina Ivanovna; KOPYLOVA, L.P., red.; KIRSANOVA, N.A., tekhn. red.

[Trade unions in Petrograd before the Great October Socialist Revolution, 1907-1917; pages from the history of the trade union movement in the U.S.S.R.] Profsoiuzy Petrograda do Velikoi Oktiabr'skoi sotsialisticheskoi revoliutsii (1907-1917 gody); iz istorii profsoiuznogo dvizheniia v SSSR. [Moskva] Izd-vo VTsSPS, 1957. 128 p.
(Leningrad--Trade unions) (MIRA 11:2)

SHALAYEVA, Z. (Stantsiya Alatyr', Chuvashskaya ASSR).

Motion pictures in "Red Corners." Kinomekhanik no.9:13 S '53. (MLRA 6:9)
(Moving-picture plays)

ACC NR: AT6036123 (N) SOURCE CODE: UR/3116/66/279/000/0121/0122

AUTHOR: Vlasova, Ye. N.; Shalayeva, Z. K.

ORG: none

TITLE: Alphanumeric information output from a Ural-2 computer

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, v. 279, 1966. Chislennyye metody analiza i predvychisleniya gidrometeorologicheskikh poley v Arktike (Numerical methods of analyzing and computing hydrometeorological fields in the Arctic), 121-122

TOPIC TAGS: computer, computer application, computer program / Ural 2 COMPUTER OUTPUT UNIT, COMPUTER

ABSTRACT: An alphanumeric printer and output from a Ural-2 computer, developed in the Computer Laboratory of the Arctic and Antarctic Institute, are discussed. In the Ural-2, control of wide-carriage printing is accomplished using the standard subprogram discussed in the article; a program for paper drive is also presented. Some of the printer's shortcomings are discussed, and it is stated that the print-out speed is six to seven times less than that of the Ural-2's conventional printer. Despite the problems mentioned in the article, the alpha-

Card 1/2

ACC NR: AT6036193 SOURCE CODE: UR/3116/66/277/000/0165/0167

AUTHOR: Vlasova, Ye. N.; Shalayeva, Z. K.

ORG: none

TITLE: Organization of the Ural-2 computer control register

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, v. 277, 1966. Chislennyye metody issledovaniya gidrometeorologicheskikh usloviy v Arktike s ispol'zovaniyem elektronnykh tsifrovykh vychislitel'nykh mashin. (Numerical methods of studying hydrometeorological conditions in the Arctic with the use of electronic digital computers), 165-167.

TOPIC TAGS: computer component, computer design, memory core, digital computer, computer control system, Ural-2 computer

ABSTRACT: A control register which permits any core memory location to be interrogated without stopping the computation process was designed at the Arctic and Antarctic Scientific Research Institute Computer Laboratory. This design is useful when programs have to be debugged on the Ural-2 computer, as this operation involves manipulation of specific memory cell contents without interrupting the machine operation. The block diagrams showing the Ural-2 modules and interconnection

Card 1/2

SHALAYEVSKIY, Mikhail Grigor'yevich, podpolkovnik; ROSSAL, N.A., polkovnik, red.; SOKOLOVA, G.F., tekhn.red.

[Gasoline-engine driven saws] Benzinomotornye pily. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 85 p.
(Saws) (MIRA 14:12)

SHALAYEVSKIY, Mikhail Grigor'yevich, polkovnik; MASHEVSKIY, V.F., podpolkovnik, red.; MURASHOVA, L.A., tekhn. red.

[Mobile log-frame saws] Peredvizhnye lesopil'nye ramy. Moskva, Voenizdat, 1964. 141 p. (MIRA 17:2)

L 43038-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6029794 SOURCE CODE: UR/0089/66/021/002/0083/0084

AUTHOR: Zvara, I.; Chuburkov, Yu. T.; Tsaletka, R.; Zvarova, T. S.; Shalayevskiy, M. R.; Shilov, B. V.

ORG: none

TITLE: Chemical properties of the element 104

SOURCE: Atomnaya energiya, v. 21, no. 2, 1966, 83-84

TOPIC TAGS: ~~element 104~~, transuranium element, chemical property, nuclear reaction, fission product, isotope separation

ABSTRACT: Chemical identification of the new element 104 has been attempted in a comparative study of the curium, californium, hafnium and new element chlorides. Previously, the 104^{260} isotope was identified by physical means only [G. N. Flerov et al. Atomnaya energiya, 17, 310, 1964]. The authors applied their own method, earlier developed, of a rapid, continuous separation of the elements of the III B and IV B groups of the Periodic Table to a mixture of gaseous chlorides of the elements produced by nuclear reactions. A PuO_2 target was bombarded with Ne^{22} ions in a Y-300 accelerator of the Joint Institute for Nuclear Research. Radioactive isotopes produced were chlorinated by a mixture of $NbCl_5$ and $ZrCl_4$ vapors in the 220—350C range in the chamber of the cyclotron. The curium, californium, and scandium isotope chlorides were adsorbed on the walls of the chamber and in the special filters, while

UDC: 541.9:541.27

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ACC NR: AP6029794

Zr, Hf and 104^{260} isotopes were transported in a stream of nitrogen to a fission event detector. The presence of the 104^{260} isotope was recorded by the detector in the gaseous stream transporting the IV B group element chlorides. A total of 12 atoms of the 104^{260} isotope was recorded during a series of experiments. Recurrence intervals of all 12 spontaneous fission events confirmed the earlier established half-life of the new element (0.3 ± 0.1 sec). Thus, confirmation was obtained of the earlier advanced hypothesis of a sharp difference in the chemical property between the 104 element and transuranium elements which were discovered in the past few years. The atomic number of the new element was determined and the element 104 was shown to be close to hafnium, hence to belong to the IV b group of the Periodic Table of the Elements. Thanks are expressed to G. N. Flerov, Corresponding Member of the Academy of Sciences SSSR. [JK]

SUB CODE: 07/ SUBM DATE: 18May66/ ORIG REF: 004/ OTH REF: 001 ATD Press 5065

Card 2/2

16(1)
AUTHOR: Shalayevskiy,O.V. SOV/43-59-7-5/17

TITLE: On the Stability for the Theorem of D.A.Raykov (Ob ustoychivosti dlya teoremy D.A.Raykova)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 7(2), pp 41-49 (USSR)

ABSTRACT: The distribution function

$$\Pi\left(\frac{x-\alpha}{\sigma};\lambda\right),\quad \sigma>0,\quad \alpha\leqslant 0,\quad \lambda>0,$$

where

$$\Pi(x;\lambda)=\begin{cases}0 \text{ for } x\leqslant 0\\ \sum_{m=0}^{n} e^{-\lambda}\frac{\lambda^m}{m!} \text{ for } x>0 \text{ and } n\geqslant 0, \text{ integral}, n<x\leqslant n+1,\end{cases}$$

is denoted as a Poisson law.
Theorem: Let the distribution function $F(x)$ of the sum $X = X_1+X_2$ of two independent random variables X_1 and X_2 satisfy the condition

$$|F(x) - \Pi(x;\lambda)| < \varepsilon\ ,\ -\infty<x<\infty,$$

where $\varepsilon<1$ and λ are given positive numbers. Let $F_i(x)$ be

Card 1/2

On the Stability for the Theorem of D.A.Raykov SOV/43-59-7-5/17

distribution functions of the X_i, i = 1,2; let a be the upper bound of those y for which $P(X_1 < y) \leq \sqrt{\varepsilon}$ and

$$\lambda_1 = \int_0^{N+1} x dF_1(x+a), \quad \lambda_2 = \int_0^{N+1} x dF_2(x-a), \quad \frac{1}{\varepsilon} = N^N.$$

Then for a sufficiently small ε and for an arbitrary $\omega < \frac{1}{2}$ there hold the inequations

$$|F_1(x) - \prod(x-a;\lambda_1)| < (\lambda + \frac{1}{\lambda})(\ln \frac{1}{\varepsilon})^{-\omega}$$

$$|F_2(x) - \prod(x+a;\lambda_2)| < (\lambda + \frac{1}{\lambda})(\ln \frac{1}{\varepsilon})^{-\omega}.$$

From the theorem there follows a result proved by D.A.Raykov [Ref 3]. The author mentions the papers of N.A.Sapogov. There are 4 references, 3 of which are Soviet, and 1 French.

SUBMITTED: March 26, 1957

Card 2/2

16(1),16(2) [illegible]

679.6
SOV/20-130-1-9/60

AUTHOR: Shalayevskiy, O.V.

TITLE: Some Remarks on the Levelling of Observations With Unknown Weights

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 1, pp 37-40 (USSR)

ABSTRACT: Let the unknown but uniquely defined parameters $\xi_1, \ldots, \xi_m$ be combined with the measured term λ by the relation $\lambda = a_0 + a_1 \xi_1 + \ldots + a_m \xi_m$, where $a_0, a_1, \ldots, a_m$ a priori are given constants. The author investigates confidence estimations of given linear functions of the parameters $\xi_1, \ldots, \xi_m$. The assumptions usual for the treatment of the levelling problem are made. But it is not demanded that the exactnesses of the measurements or there ratios are known. The estimations are obtained by a combination of the method of Wald [Ref 2] and the construction of the confidence ellipsoids due to Yu.V. Linnik [Ref 3]. Four theorems and two lemmas are formulated.

Card 1/2

6?9?6
Some Remarks on the Levelling of Observations With Unknown Weights SOV/20-130-1-9/69

The author thanks A.N.Kolmogorov for advices.
There are 7 references, 2 of which are Soviet, 1 German, 2 American, and 2 English.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova (Leningrad State University imeni A.A.Zhdanov)

PRESENTED: July 3, 1959, by A.N.Kolmogorov, Academician
SUBMITTED: July 3, 1959

Card 2/2

PHASE I BOOK EXPLOITATION SOV/4301

Soveshchaniye po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 1958

Trudy Vsesoyuznogo soveshchaniya po teorii veroyatnostey i matematicheskoy statistike, Yerevan, 19-25 sentyabrya 1958 g. (All-Union Conference on the Theory of Probability and Mathematical Statistics. Held in Yerevan 19-25 September, 1958. Transactions) Yerevan, Izd-vo AN ASSR, 1960. 291 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR.

Editorial Staff: G.A. Ambartsumyan, B.V. Gnedenko, Ye.B. Dynkin, Yu.V. Linnik and S. Kh. Tumanyan; Ed. of Publishing House: A.G. Sikuni; Tech. Ed.: M.A. Kaplanyan.

PURPOSE: The book is intended for mathematicians.

COVERAGE: The book contains 41 articles submitted to the Conference and dealing with the theory of probability and mathematical statistics. Some of the articles are the papers read at the Conference and edited for publication, while others outline the theses of papers which appeared or are scheduled to appear, wholly or in part, in other publications; in some cases, such publications are quoted. A list of the papers whose contents were published elsewhere is included and the places of publication are indicated. Individual articles examine theories of mass service, spectral instruments, numbers, games, and certain functions, and discuss the theorems of Shannon, Markov's chains, and certain processes, quantities, and functions. Such items as the method of least squares, the stochastic, Markov's and diffusion processes, measures and their applications, a scheme of Bernoulli experiments, Markov-type random fields, visible distribution of stars, Brownian motion, capacity of radio channels, and defective products are considered. No personalities are mentioned. References accompany some of the articles.

Card 6/8

MITROPOL'SKIY, Aristarkh Konstantinovich; SHALAYEVSKIY, O.V., red.; ROZENGAUZ, N.M., red.; LUK'YANOV, A.A., tekhn. red.

[Technique of statistical calculations] Tekhnika statisticheskikh vychislenii. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1961. 479 p. (MIRA 14:6)

(Mathematical statistics)

L 12995-63 EWT(d)/FCC(w)/BDS AFFTC IJP(C)
ACCESSION NR: AP3000288 S/0020/63/150/001/0026/0027

53
52

AUTHOR: Linnik, Yu. V. (Corresponding Member, AN SSSR); Shalayevskiy, O. V.

TITLE: Analytic theory of tests for the Behrens-Fisher problem 16

SOURCE: AN SSSR. Doklady, v. 150, no. 1, 1963, 26-27

TOPIC TAGS: Behrens-Fisher problem

ABSTRACT: Let $g(\xi, \eta)$ be a test such that for any semi-circle $K \subset \Omega = \{-\infty<\xi<+\infty, 0\leq\eta<\infty\}$ with center at the origin, then either

$$\text{vrai}\max_K g(\xi, \eta) < \text{vrai}\max_\Omega g(\xi, \eta),$$

or

$$\text{vrai}\min_K g(\xi, \eta) > \text{vrai}\min_\Omega g(\xi, \eta).$$

Using analytic continuation, it is shown that $g(\xi,\eta)$ cannot exist. Author also states (without proof) conditions on the critical zone under which a similar test fails to exist. Orig. art. has: 2 formulas.

ASSOCIATION: Leningradskoye otdeleniye Matematicheskogo instituta im. V. A. Steklova Akademii nauk SSSR (Leningrad Division of the Mathematics Inst., Academy of Sciences, SSSR

Card 1/2

SHALAYEVSKIY, O.V.

Testing the fundamental hypotheses in multivariate analysis.
Vest. LGU 18 no.13:150-152 '63. (MIRA 16:9)
(Mathematical statistics)

ABADZHI, K.I.; BOYTSOV, A.N.; VOLOSEVICH, F.P.; GOBERMAN, P.N.; KEMPINSKIY, M.M.; KUTAY, A.K.; NARINSKIY, F.I.; ODING, G.A.; TAYTS, B.A.; RUBINOV, A.D.; SHTYURMER, G.A.; BRZHEZINSKIY, M.L., kand. tekhn. nauk, retsenzent; SHALAYEVSKIY, O.V., red.; LEYKINA, T.L., red.izd-va; SPERANSKAYA, O.V., tekhn. red.

[Handbook on production control in the machinery industry] Spravochnik po proizvodstvennomu kontroliu v mashinostroenii. Izd.2., perer. i dop. Moskva, Mashgiz, 1964. 748 p. (MIRA 17:3)

SHALAYEVSKIY, O.V.

Existence of similitude tests for the Behrens-Fisher problem. Dokl. AN SSSR 154 no.4:795-797 F '64.
(MIRA 17:3)

1. Leningradskoye otdeleniye Matematicheskogo instituta im. V.A. Steklova AN SSSR. Predstavleno akademikom V.I. Smirnovym.

KAGAN, A.M.; SHALAYEVSKIY, O.V.

Behrens - Fisher's problem concerning the existence of similar zones in an algebra of sufficient statistics. Dokl. AN SSSR 155 no.6:1250-1252 Ap '64. (MIRA 17:4)

1. Predstavleno akademikom A.N.Kolmogorovym.

LINNIK, Yu.V.; ROMANOVSKAYA, I.L.; SHALAYEVSKIY, O.V. (Leningrad)

Remark on the theory of the Fisher-Welch-Wald test. Teor. veroiat.i ee prim. 10 no.4:727-730 '65.
(MIRA 18:12)

1. Submitted June 4, 1965.

L 25931-66 EWT(d)/T IJP(c)

ACC NR: AP6016661 SOURCE CODE: UR/0052/65/010/004/0727/0730

AUTHOR: Linnik, Yu. V. (Leningrad); Romanovskaya, I. L.; Shalayevskiy, [illegible]

ORG: none

TITLE: Remarks on the theory of the Fisher-Welch-Wald test

SOURCE: Teoriya veroyatnostey i yeye primeneniya, v. 10, no. 4, 1965, 727-730

TOPIC TAGS: probability, mathematics

ABSTRACT: The present article deals with testing of the H_0 hypothesis regarding equality of the means of two normal populations with unknown dispersions of samples sizes n_1 and n_2. Previous papers by the first two of the authors left a gap in the arguments which is filled by the present article. Theorems are derived which represent stronger results than those of the preceding papers. Orig. art. has: 10 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 04Jun65 / ORIG REF: 003 / OTH REF: 001

Card 1/1 FW

ACC NR: AP7007072 SOURCE CODE: UR/0020/66/168/004/0743/0746

AUTHOR: Linnik, Yu. V. (Academician); Pliss, V. A.; Shalayevskiy, O. V.

ORG: Leningrad Branch, Mathematics Institute im. V. A. Steklov, AN SSSR (Leningradskoye otdeleniye Matematicheskogo instituta AN SSSR)

TITLE: Theory of Hotelling's test

SOURCE: AN SSSR. Doklady, v. 168, no. 4, 1966, 743-746

TOPIC TAGS: statistics, mathematics

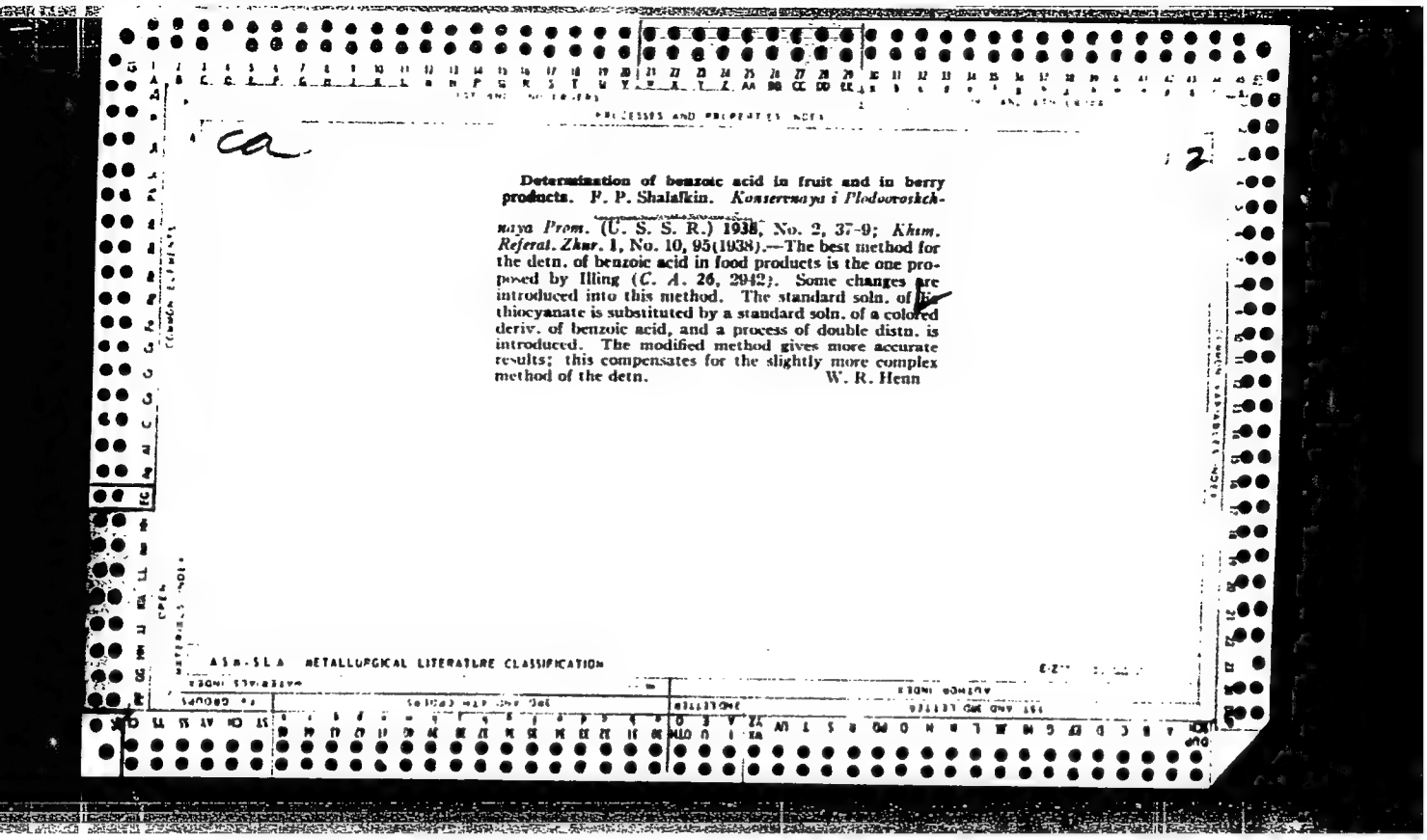
SUB CODE: 12

ABSTRACT: The problem examined is the verification of the statistical hypothesis of $H : \xi = 0$ as compared with the (complex) alternative $H_\delta : N\xi^T \sum^{-1} = \delta$, where δ is an arbitrary, fixed positive integer. This problem, under certain conditions, is similar to the problem of detecting a signal in noise. In this case the Hotelling T^2 test is usually applied, but so far the properties of the test are enigmatic, and no nontrivial case has been found to which the T^2 test is applicable.

In this paper the investigations of Giri, Kiefer, and Stein (Ann. Math. Stat., Vol 34, 1524 (1963) are continued and the minimax nature of the T^2 test is proved for the alternative H_δ when $p = 2$, $N = 4$.

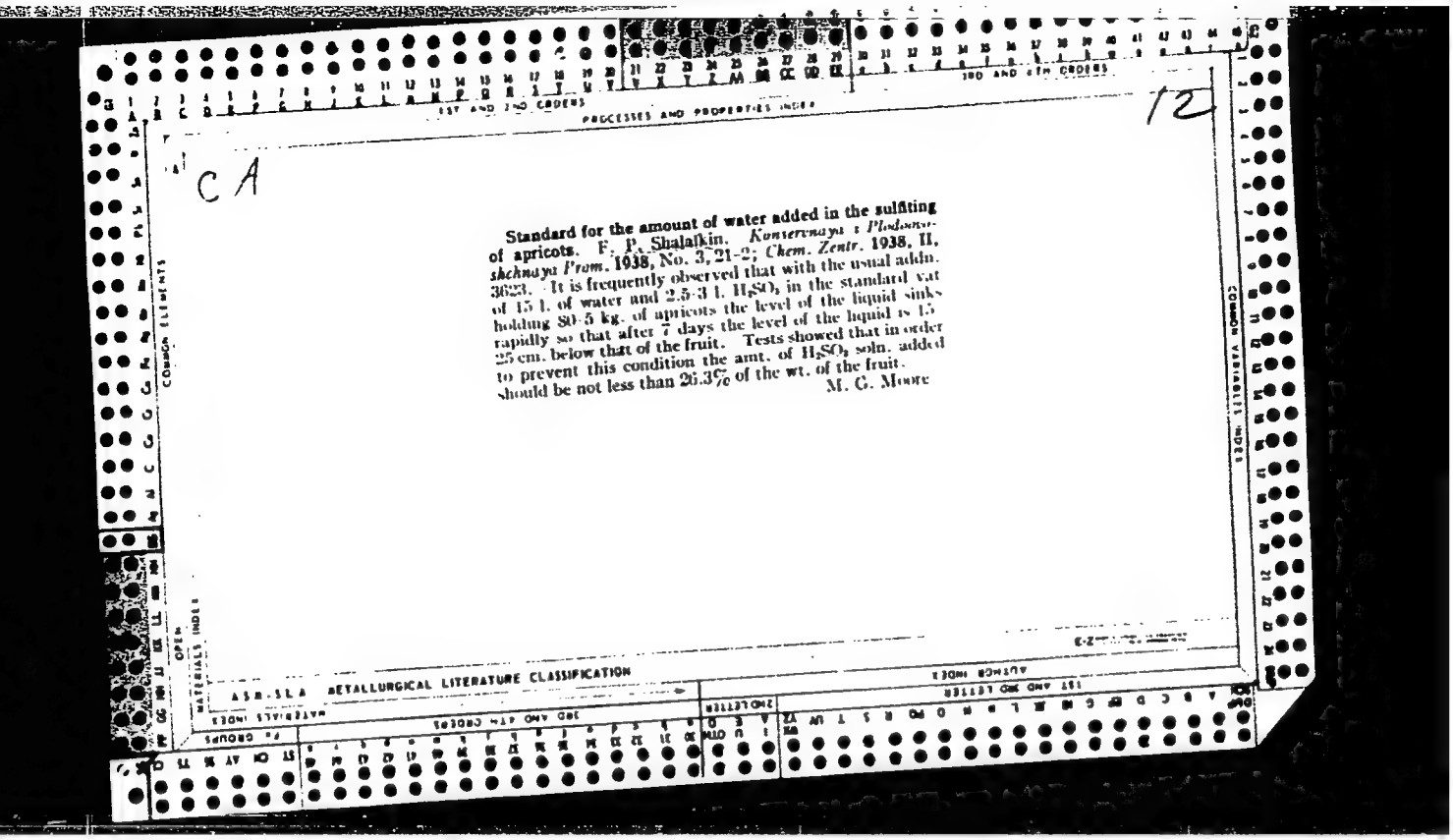
[JPRS: 38,417]

Card 1/1 UDC: 519.251.8



Determination of benzoic acid in fruit and in berry products. P. P. Shalafkin. *Konservnaya i Plodovoroshchnaya Prom.* (U. S. S. R.) **1938**, No. 2, 37-9; *Khim. Referat. Zhur.* **1**, No. 10, 95(1938).—The best method for the detn. of benzoic acid in food products is the one proposed by Illing (*C. A.* **26**, 2942). Some changes are introduced into this method. The standard soln. of Fe thiocyanate is substituted by a standard soln. of a colored deriv. of benzoic acid, and a process of double distn. is introduced. The modified method gives more accurate results; this compensates for the slightly more complex method of the detn.

W. R. Henn



CA

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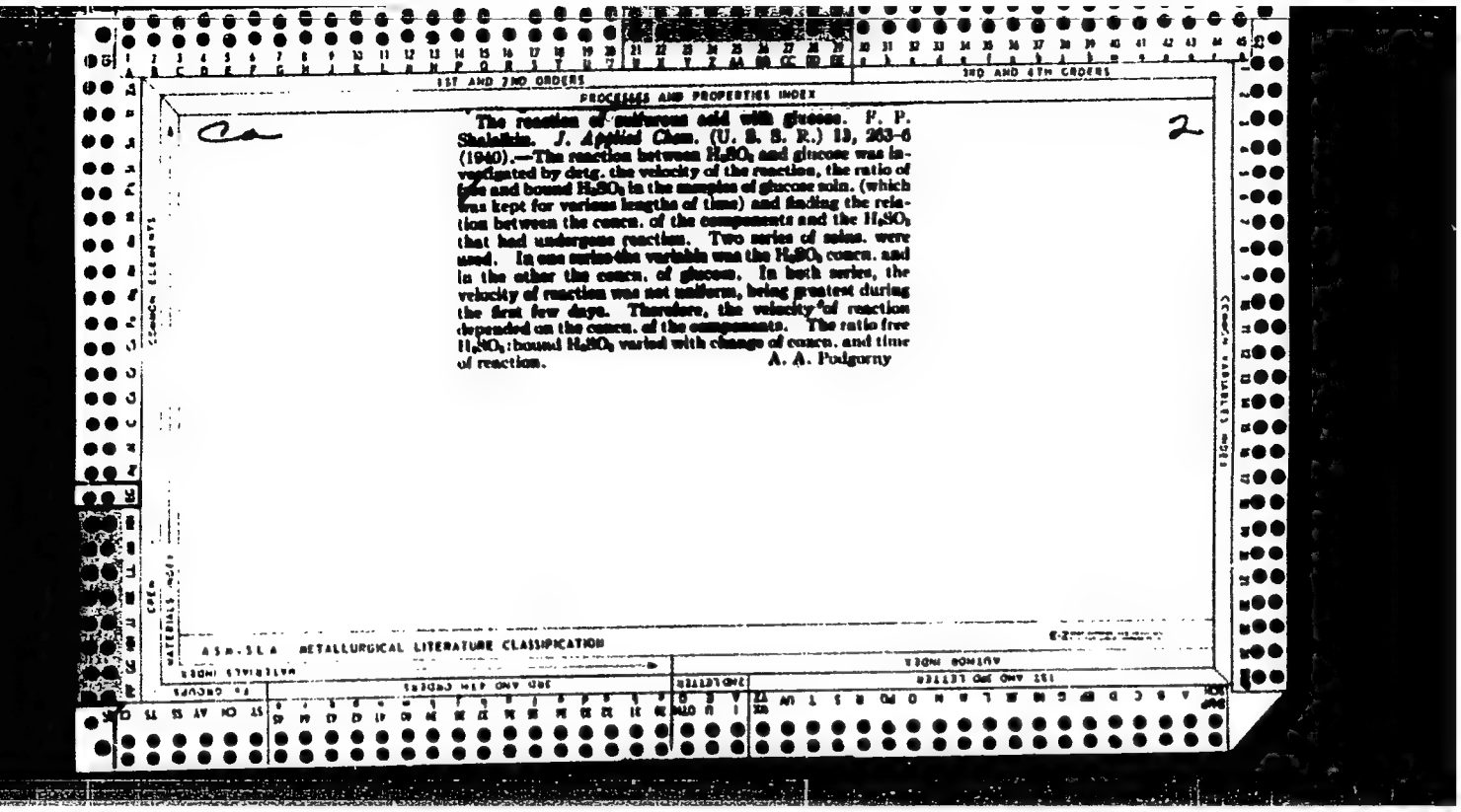
Standard for the amount of water added in the sulfiting of apricots. F. P. Shalaĭkin. *Konservnaya i Plodovoshchnaya Prom.* 1938, No. 3, 21–2; *Chem. Zentr.* 1938, II, 3623. It is frequently observed that with the usual addn. of 15 l. of water and 2.5–3 l. H_2SO_3 in the standard vat holding 80–5 kg. of apricots the level of the liquid sinks rapidly so that after 7 days the level of the liquid is 15–25 cm. below that of the fruit. Tests showed that in order to prevent this condition the amt. of H_2SO_3 soln. added should be not less than 26.3% of the wt. of the fruit.

M. G. Moore



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

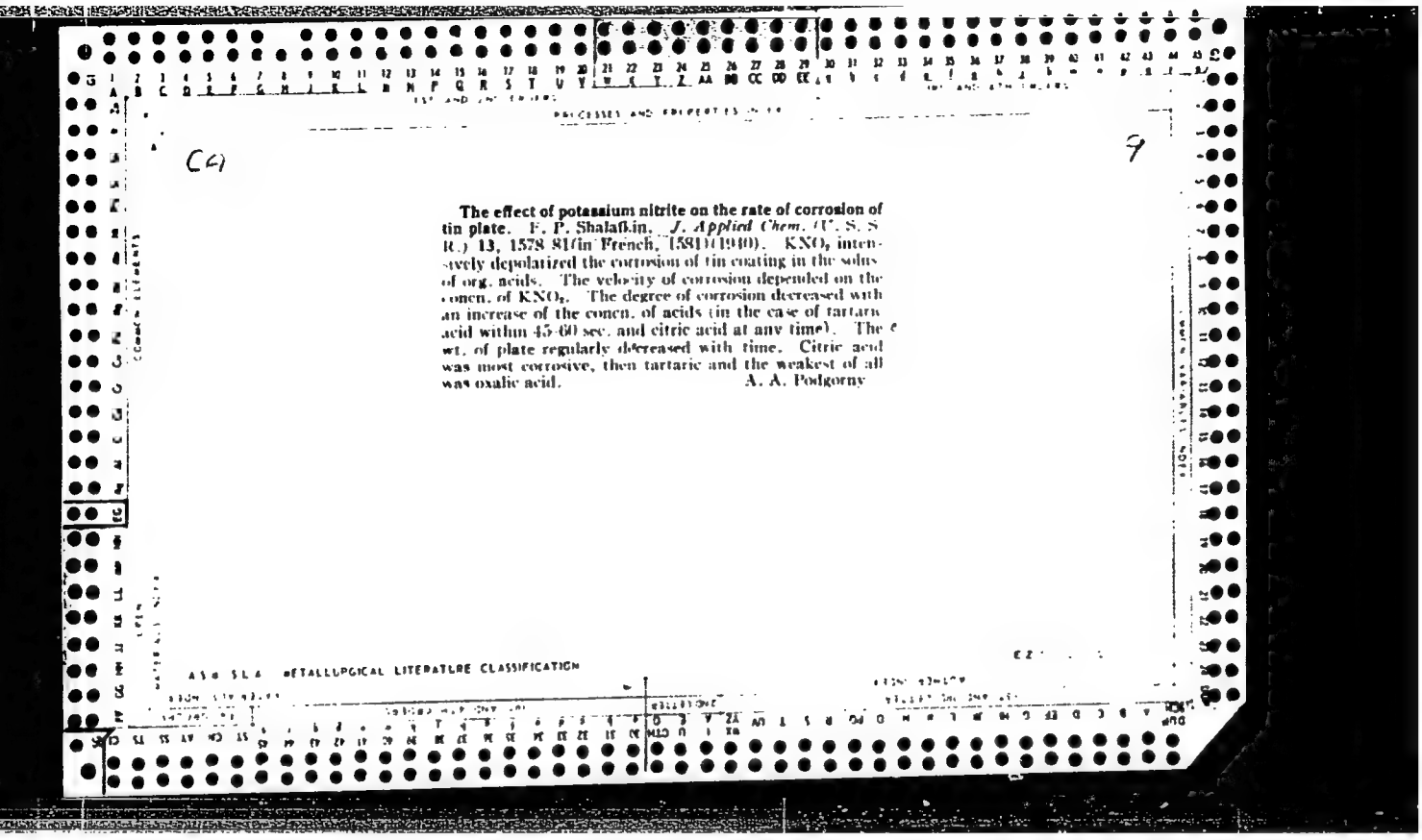
2a

The reaction of sulfurous acid with glucose. P. P. Shalalkin. *J. Applied Chem.* (U. S. S. R.) 13, 263-6 (1940).—The reaction between H_2SO_3 and glucose was investigated by detg. the velocity of the reaction, the ratio of free and bound H_2SO_3 in the samples of glucose soln. (which was kept for various lengths of time) and finding the relation between the concn. of the components and the H_2SO_3 that had undergone reaction. Two series of solns. were used. In one series the variable was the H_2SO_3 concn. and in the other the concn. of glucose. In both series, the velocity of reaction was not uniform, being greatest during the first few days. Therefore, the velocity of reaction depended on the concn. of the components. The ratio free H_2SO_3:bound H_2SO_3 varied with change of concn. and time of reaction.

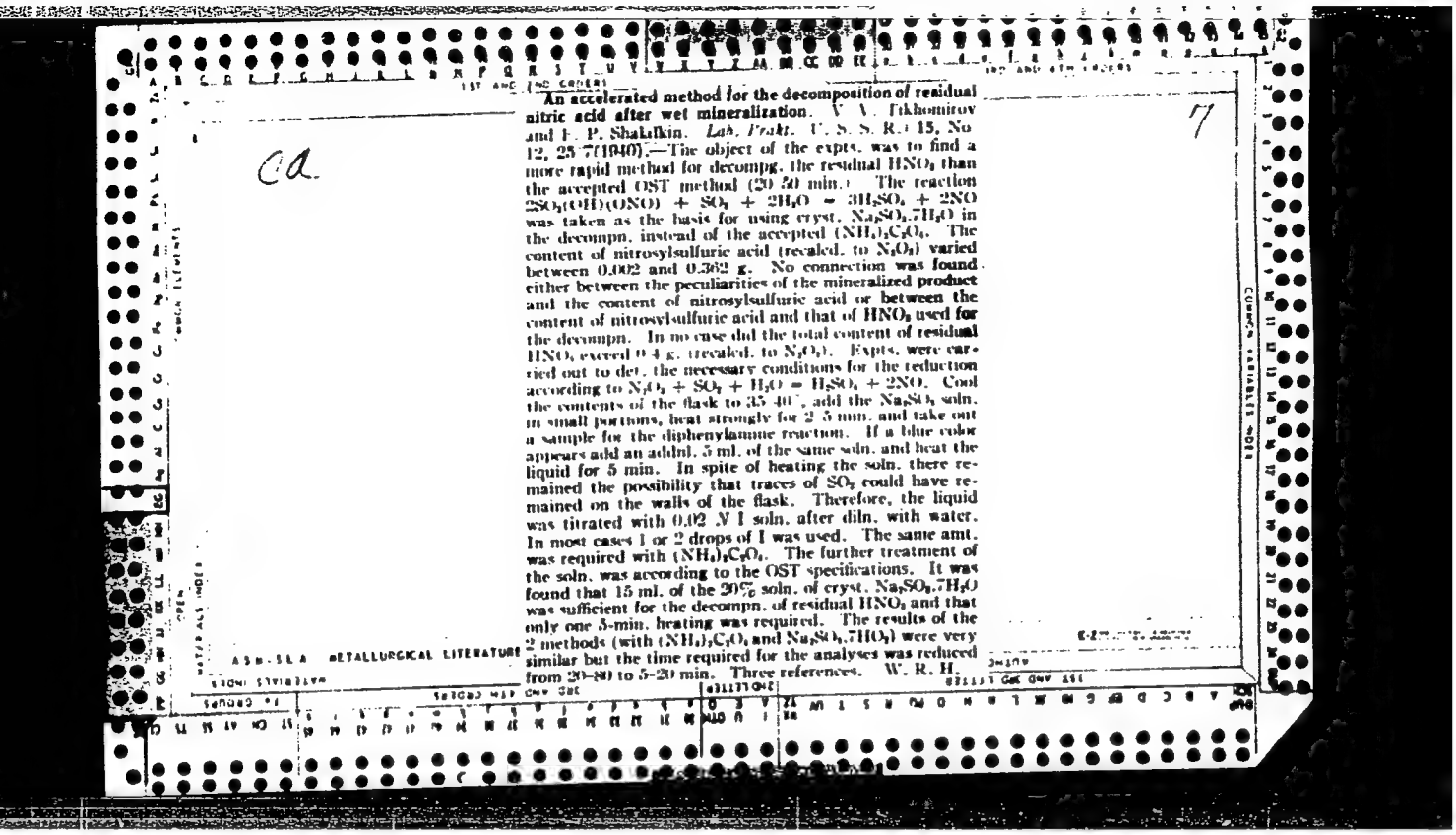
A. A. Podgorny

2

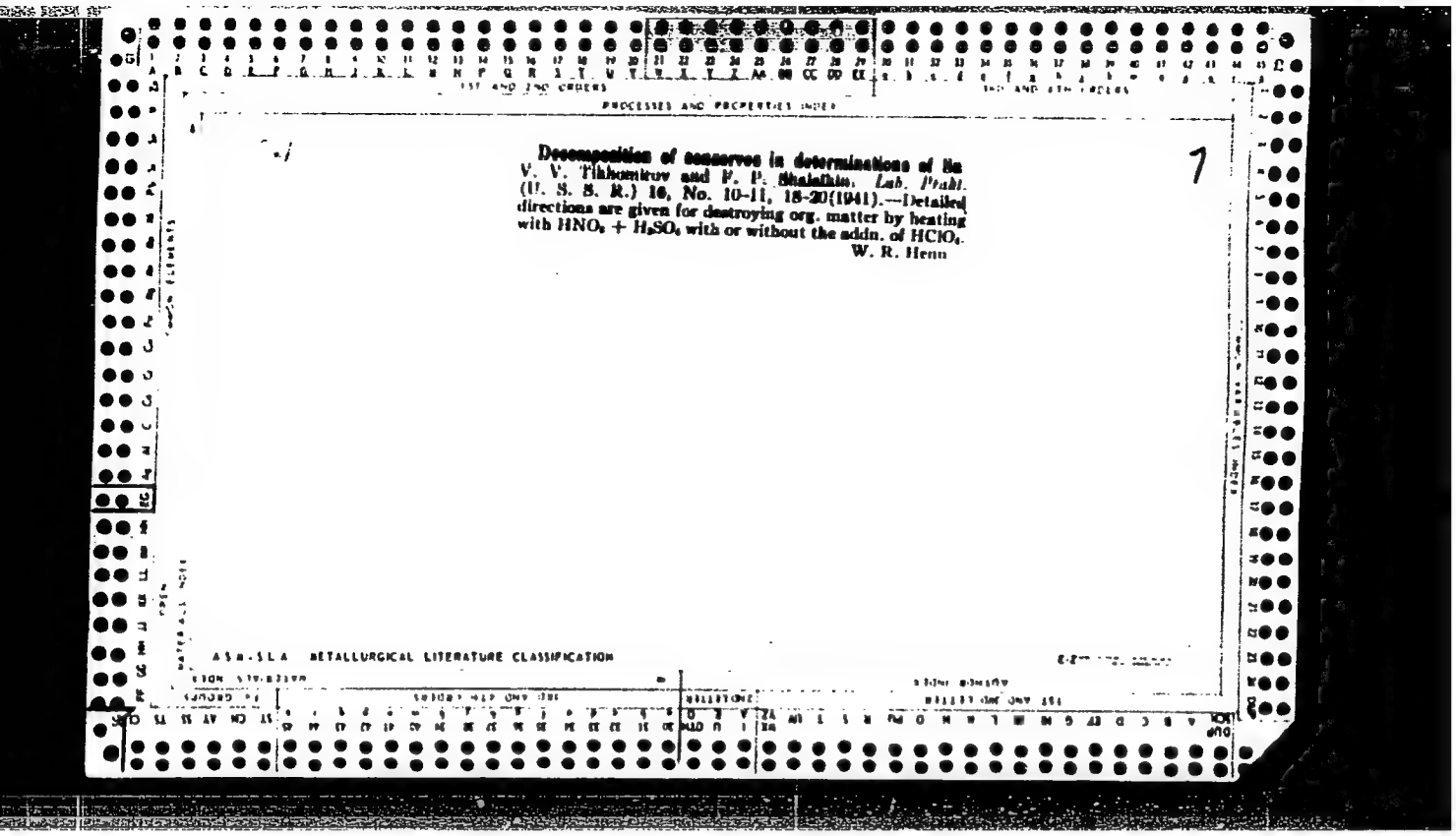
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The effect of potassium nitrite on the rate of corrosion of tin plate. F. P. Shalaßin. *J. Applied Chem. (U. S. S. R.)* 13, 1578-81(in French, 1581)(1940). KNO_2 intensively depolarized the corrosion of tin coating in the solns. of org. acids. The velocity of corrosion depended on the concn. of KNO_2. The degree of corrosion decreased with an increase of the concn. of acids (in the case of tartaric acid within 45-60 sec. and citric acid at any time). The wt. of plate regularly decreased with time. Citric acid was most corrosive, then tartaric and the weakest of all was oxalic acid. A. A. Podgorny



An accelerated method for the decomposition of residual nitric acid after wet mineralization. V. V. Tikhomirov and F. P. Shakulkin. *Lab. Prakt.* U. S. S. R. 15, No 12, 25-7(1940).—The object of the expts. was to find a more rapid method for decompg. the residual HNO_3 than the accepted OST method (20-30 min.) The reaction $2SO_2(OH)(ONO) + SO_2 + 2H_2O = 3H_2SO_4 + 2NO$ was taken as the basis for using cryst. $Na_2SO_3.7H_2O$ in the decompn. instead of the accepted $(NH_4)_2C_2O_4$. The content of nitrosylsulfuric acid (recalcd. to N_2O_3) varied between 0.002 and 0.362 g. No connection was found either between the peculiarities of the mineralized product and the content of nitrosylsulfuric acid or between the content of nitrosylsulfuric acid and that of HNO_3 used for the decompn. In no case did the total content of residual HNO_3 exceed 0.4 g. (recalcd. to N_2O_3). Expts. were carried out to det. the necessary conditions for the reduction according to $N_2O_3 + SO_2 + H_2O = H_2SO_4 + 2NO$. Cool the contents of the flask to 35-40°, add the Na_2SO_3 soln. in small portions, heat strongly for 2-3 min. and take out a sample for the diphenylamine reaction. If a blue color appears add an addnl. 5 ml. of the same soln. and heat the liquid for 5 min. In spite of heating the soln. there remained the possibility that traces of SO_2 could have remained on the walls of the flask. Therefore, the liquid was titrated with 0.02 *N* I soln. after dilu. with water. In most cases 1 or 2 drops of I was used. The same amt. was required with $(NH_4)_2C_2O_4$. The further treatment of the soln. was according to the OST specifications. It was found that 15 ml. of the 20% soln. of cryst. $Na_2SO_3.7H_2O$ was sufficient for the decompn. of residual HNO_3 and that only one 5-min. heating was required. The results of the 2 methods (with $(NH_4)_2C_2O_4$ and $Na_2SO_3.7H_2O$) were very similar but the time required for the analyses was reduced from 20-30 to 5-20 min. Three references. W. R. H.



PROCESSES AND PROPERTIES INDEX

Decomposition of conserves in determinations of Sn. V. V. Tikhomirov and P. P. Shalaikin. *Lab. Prakt.* (U. S. S. R.) 10, No. 10-11, 18-20(1941).—Detailed directions are given for destroying org. matter by heating with $HNO_3 + H_2SO_4$ with or without the addn. of $HClO_4$.
W. R. Henn

1

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SHALAYKIN, F. P.

USSR/Chemistry - Lead Oxide Nov 51

"Accelerated Process for the Preparation of Lead Oxide," F. P. Shalaykin

"Zhur Prik Khim" Vol XXIV, No 11, pp 1212, 1213

Discusses conditions for new, rapid means to prep PbO (widely used in glass, ceramics, paint production, and analytical practice) by heating pure metallic Pb with chemically pure KNO_3 and NH_4NO_3. Technological processes involved in methods now used for production of PbO are complex and time-consuming.

204T9

L 8506-66 (A) EWT(m)/EWP(j)/T/ETC(m) WW/RM

ACC NR: AP5028487 SOURCE CODE: UR/0286/65/000/020/0065/0066

AUTHORS: Nifant'yev, E. Ye.; Shalayskaya, G. V.

ORG: none

TITLE: A method for obtaining phosphites and phosphonites of polyvinyl alcohol. Class 39, No. 175653 announced by Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 65-66

TOPIC TAGS: phosphorus compound, polyvinyl alcohol, esther, amide, phosphoric acid, phosphinic acid

ABSTRACT: This Author Certificate presents a method for obtaining phosphites and phosphonites of polyvinyl alcohol. To obtain products with a high thermal stability, polyvinyl alcohol is treated with esters or amides of phosphoric or phosphinic acid while being heated to 100-180C.

SUB CODE: 07/ SUBM DATE: 17Nov64

BVK

Card 1/1 UDC: 678.674 : 678.85

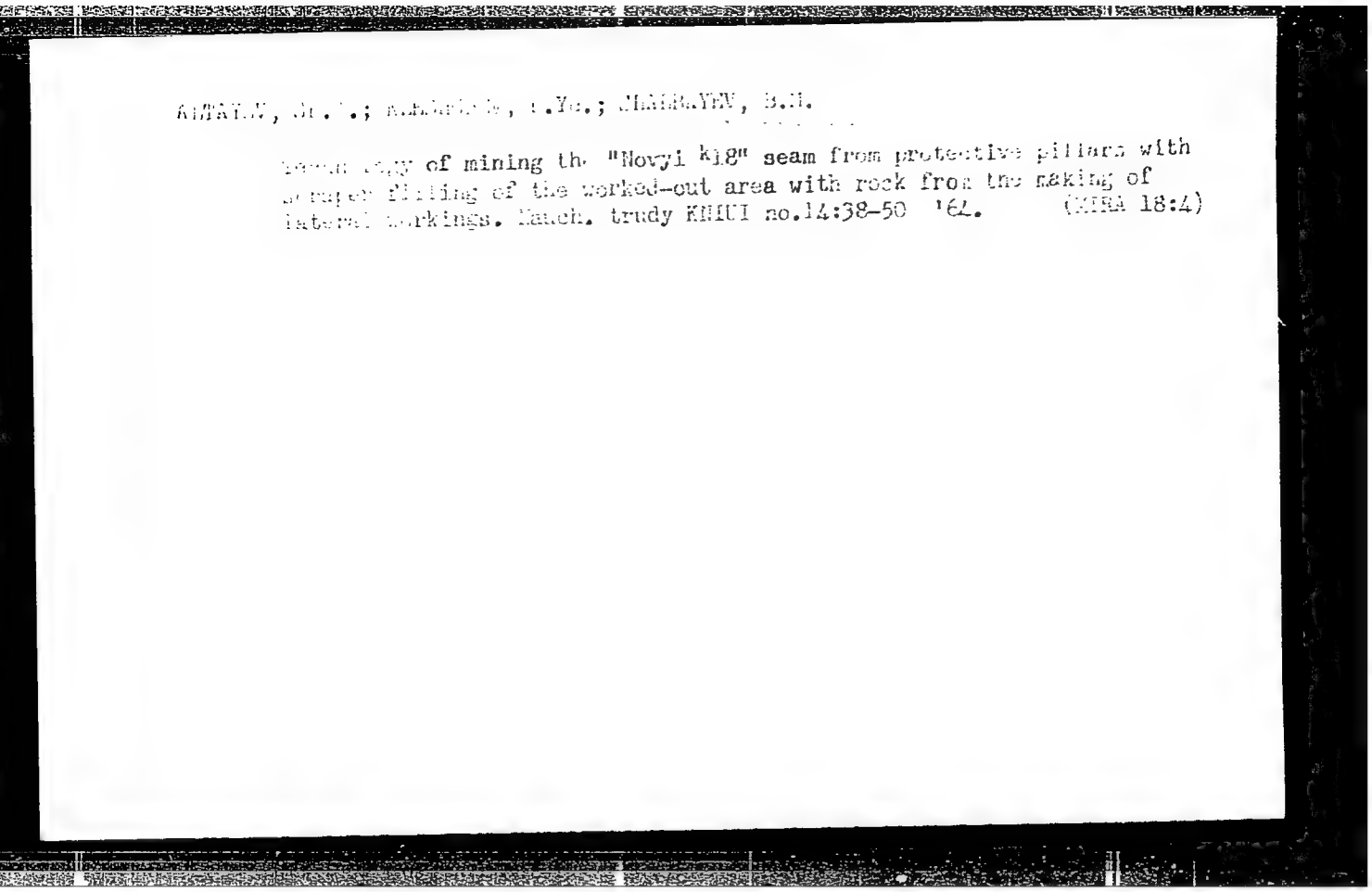
1. SHALBAKINA, L. I. ; VAKARENKO, S. S.: PANIN, A. I.: BEZRUK, V.S.

2. USSR (600)

4. Afforestation

7. Leaders in steppe forestry speak. Les i step' 4 no 10: 1952

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.



KHATAYEV, Ye.A.; [illegible], I.Ye.; SHAMAYEV, B.I.

[illegible] of mining the "Novyi k18" seam from protective pillars with [illegible] filling of the worked-out area with rock from the making of lateral workings. Nauch. trudy KNIUI no.14:38-50 '62. (MIRA 18:4)

ALTAYEV, Sh.A., SHALAYEV, P.M.

Methods of bearing in the mine the rock obtained during the making of lateral drifts. Mezhvuz. trudy KNIVI no.1:15-24 '64. (MIRA 18:4)

SHAL'CHUTE, A. M., Cand of Med Sci -- (diss) " Differential diagnosis of primary lung cancer.(According to information obtained at hospitals of the city of Vil'nyus)."Vil'nyus, 1957, 18 pp (Vil'nyus State University im V. Kapsukas), (KL, 29-57, 94)

RAYATSKAS, V.L.; SHAL'CHYUTE, I.P.

Use of sodium silicate as thickener in LNT-a chloroprene latex.
Kozh.-obuv. prom. 6 no.7:24-26 Jl '64. (MIRA 17:8)

SHAL'DA, Miron Ivanovich; PEKELIS, V.D., red.; TISTROVA, O.Ye., red.; VORONIN, K.P., tekhn.red.

[Homemade hydroelectric power station] Samodel'naia gidroelektrostantsiia. Pod obshchei red. V.D.Pekelisa. Moskva, Gos.energ. izd-vo, 1958. 39 p. (MIRA 11:12)
(Hydroelectric power stations)

VEDYAPIN, M.G.; GOGA, I.V.; SHALDAISOV, A.P.

Wider use of winches for roof caving. Ugol' 35 no.2:19-23 F '60. (MIRA 13:5)

1. Kiselevskiy mashinostroitel'nyy zavod Kemerovskogo sovnarkhoza.
(Winches) (Mining engineering)

L 11711-66 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) JD/WW/JG
ACC NR: AP6002340 (N) SOURCE CODE: UR/0198/65/001/012/0095/0100

57
56
B

AUTHOR: Shal'da, L. M. (Kiev)

ORG: Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: On the effect of a fluid on the vibration of a plate 2.6

SOURCE: Prikladnaya mekhanika, v. 1, no. 12, 1965, 95-100

TOPIC TAGS: plate oscillation, plate vibration, plate stability, Cauchy problem, fluid mechanics, vibration, vibration damping

ABSTRACT: A study is made of the likelihood of the occurrence of undamped vibrations of a plate under the action of flow of an ideal incompressible fluid. Two cases are studied: the case of an incident stream with velocity $V = V_0 \sin \sigma t$.

The plate has the following characteristics: the width of the plate is 1 in the coordinate direction Ox and the plate is infinite in the direction Oy; the incident stream is a planar stream striking the plate at an angle $\pi/2$. The equation of small vibrations is given as

$$D\frac{\partial^4 w(x,t)}{\partial x^4} = p(x,t) - \rho h \frac{\partial^2 w(x,t)}{\partial t^2},$$

Card 1/3

2

where $w(x,t)$ is the deflection of the median surface of the plate; ρ is the density of the plate material; h is the thickness of the plate; D is the cylindrical stiffness; $p(x,t)$ is the distributed loading intensity. Boundary conditions are given as

$$w(0,t)=0; \quad w(l,t)=0; \quad \frac{\partial^2 w(0,t)}{dx^2}=0; \quad \frac{\partial^2 w(l,t)}{\partial x^2}=0.$$

The stream flow potential in the constant velocity case is divided into two terms, one for the stream itself and the other for the potential from vibrational motion of the fluid caused by plate vibration. The second term satisfies the Laplace condition and the boundary condition

$$\frac{\partial \varphi^*}{\partial z}=\frac{\partial w(x,t)}{\partial t}-V_0,$$

where φ^* is the second potential term mentioned above. The solution of this equation is the logarithmic form

$$\varphi^*=-\int_0^l \mu \ln|x-\xi|\,d\xi.$$

The pressure function $p(x,t)$ is found by application of a Cauchy integral; this integral is combined with the expression for small vibrations to yield the differential-integral form

$$D\frac{\partial^4 w(x,t)}{\partial x^4}=\frac{\rho'}{2\pi}\int_0^l \frac{\partial^2 w(\xi,t)}{\partial t^2}\ln|x-\xi|\,d\xi-\rho' V_0\frac{\partial w(x,t)}{\partial t}-\rho h\frac{\partial^2 w(x,t)}{\partial t^2}.$$

This form may be simplified and solved by the method of A. N. Krylov (O nekotorykh differentsial'nykh uravneniyakh matematicheskoy fiziki, M. - L., GTTI, 1950). In the case of sinusoidal variation of stream velocity, the equation of small vibrations is

$$\frac{k}{c_*^2}\frac{\partial^4\omega(x,\tau)}{\partial x^4}+\frac{\varrho'}{\varrho}\frac{\dot{V}_0}{c_*}\sin\tau\frac{\partial\omega(x,\tau)}{\partial\tau}+\varepsilon\frac{\partial^2\omega(x,\tau)}{\partial\tau^2}-\frac{\varrho'}{2\pi\varrho}\int_0^1\frac{\partial^2\omega(\xi,\tau)}{\partial\tau^2}\ln|x-\xi|\,d\xi=$$

$$=-\frac{\varrho'V_0[(1-x)\ln|1-x|+x\ln|x|-1]}{2\pi\varrho c_*}\cos\tau,$$

where

$$c_*=l\sigma;\ \tau=\sigma t;\ \varepsilon=\frac{h}{l};\ k=\frac{D}{\varrho l^3}.$$

An approximate solution is developed for this case. The author concludes: 1) vibrations of the plate will always be damped if the stream velocity is constant at a great distance from the plate; 2) under certain conditions of sinusoidal velocity the amplitude of plate vibrations can increase without limit. The author thanks Professor N. A. Kil'chevskiy for his valuable advice. Orig. art. has: 32 equations and 1 figure.

SUB CODE: 20, 13/ SUBM DATE: 19Dec64/ ORIG REF: 005/ OTH REF: 002
Card 3/3 BVK

VEDYAPIN, M.G.; GOGA, I.V.; SHALDAISOV, A.P.

Industrial testing of the LMK-20 shunting winch. Ugol' 39 no.1: 50-51 Ja '64. (MIRA 17:3)

1. Kiselevskiy mashinostroitel'nyy zavod.

GANDZYUK, M.P. [Handziuk, M.P.]; STABNIKOV, V.M.; SHALDENKO, D.K.

Air agitation for the mixing of graded products. Khar.prom. no.1:53-54 Ja-Mr '62. (MIRA 15:8)

1. Kafedra protsessov i apparatury Kiyevskogo tekhnologicheskogo instituta pishchevoy promyshlennosti (for Gandzyuk, Stabnikov).
(Distillation)

VASIL'KOVA, L.P.; Prinimal uchastiye SHALDENKOV, I.P.

Biochemical purification of the industrial waste waters from the production of vinyl acetate and the polymers based on it. Trudy VNIIT no.12:290-305 '63. (MIRA 18:11)

KOLOSOV, I. I., SHALDENKOVA, S. F.

Plants- Metabolism

Role of germinal and nodal roots in providing plants with minerals and water. Dokl. An SSSR 85, No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

L 14427-65 EWT(1)/EWT(m)/T/EEC(b)-2/EWA(h) IJP(c)/ASD(a)-5/AFWL/
AS(mp)-2/RAEM(a)
ACCESSION NR: AP4048400 S/0181/64/006/011/3272/3278

AUTHORS: Krivoglaz, M. A.; Shaldervan, P. I. 15

TITLE: Phonon correlation function and inelastic coherent scattering of neutrons by crystals containing shallow electronic impurity centers

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3272-3278

TOPIC TAGS: conduction electron, electron phonon interaction, neutron scattering, impurity scattering

ABSTRACT: This is an extension of earlier work by one of the workers (Krivoglaz, FTT v. 3, 2761, 1961), except that in addition to interactions with conduction electrons, the authors consider electron-phonon interactions accompanied by quantum transitions between discrete electron levels, such as occur in crystals containing shallow electronic centers. The phonon correlation function, frequency

Card 1/2

L 11427-65
ACCESSION NR: AP4048400

shift, and attenuation are determined. The calculation is carried out in a higher-order perturbation-theory approximation than is customary, with account taken of the finite lifetimes of the electronic states. This makes it possible to eliminate the divergences connected with the resonant character of the interaction. The influence of the interaction between phonons and local centers on the energy distribution of the scattered neutrons is investigated. The estimates made show that this interaction can lead to a noticeable change in the phonon attenuation and in the width and shape of the scattered-neutron energy distribution. Orig. art. has: 18 formulas.

ASSOCIATION: None

SUBMITTED: 21May64

ENCL: 00

SUB CODE: SS

NR REF SOV: 007

OTHER: 002

Card 2/2

L 21132-65 EEC(b)-2/EWT(1)/T----IJP(c)/SSD/AFWL/ESD(t)

ACCESSION NR: AP5001553 S/0185/64/009/012/1331/1344

AUTHOR: Kryvoglaz, M. O. (Krivoglaz, M. A.); Shaldervan, P. G. (Shaldervan, P. I.

TITLE: Single-phonon Green's function, phonon correlation function, and inelastic coherent scattering of neutrons by crystals containing shallow electronic impurity centers

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 9, no. 12, 1964, 1331-1344

TOPIC TAGS: Green function, phonon correlation function, inelastic scattering, neutron scattering, crystal impurity center, electron level

ABSTRACT: The authors show how the interaction between phonons and electrons localized in shallow impurity centers (with Bohr frequencies lower than the maximum oscillation frequency) influences the damping and the frequency shift of the interaction, brought about by the discreteness of the electron levels. The calculations were made by the method of temperature Green's functions, and to eliminate the divergences the chain of equations was uncoupled in a higher order of approximation than customary, thus taking explicit account of the width of the electron level. Formulas are derived for the Green's function with account of

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L 21132-65

ACCESSION NR: AP5001553

single-phonon interaction only, as well as for the general case. These formulas are then used to determine the single-phonon correlation functions and the damping and shift of the phonon oscillations. It is shown that when the frequency of the absorbed or emitted phonon is close to the Bohr frequency of the electron center, the energy distribution of the scattered neutrons exhibits resonant peaks, with a Lorentz line shape when the phonon damping is lower than the electron damping. If the electron damping is higher, the distribution is not Lorentzian and a narrow peak or dip is produced. The damping due to the electron phonon interaction is estimated and is shown to be independent of the nature of the center, being governed only by the density of the localized electrons and the distribution function of the oscillation frequencies near the Bohr frequency. This damping can become appreciable at relatively low density concentrations ~10^{-3}--10^{-5}. Orig. art. has: 51 formulas.

ASSOCIATION: Instytut metalofizyky AN URSR, Kiev (Institute of Metal Physics, AN UkrSSR).

SUBMITTED: 07May64 ENCL: 00

SUB CODE: SS, NP NR REF SOV: 008 OTHER: 003

Card 2/2

ACCESSION NR: AP4043386 S/0181/64/006/008/2526/2528

AUTHORS: Belyayev, L. M.; Belikova, G. S.; Dobrzhanskiy, G. F.; Nemesov, G. B.; Shaldin, Yu. V.

TITLE: Dielectric constant of crystals possessing the electro-optical effect

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2526-2528

TOPIC TAGS: dielectric constant, dielectric loss, electrooptic device, phosphate, optical communication, ir communication

ABSTRACT: The authors measured the dielectric constant ε and the loss angle tangent $\tan\delta$ in the frequency range from 10^2 to 40×10^9 cps of the crystal $NH_4H_2PO_4$ and KH_2PO_4 relative to the corresponding values for air. The dispersion properties of these constants are important because the electro-optical effect in crystals is used for broadband modulation of electromagnetic radiation at optical and infrared wavelengths. The test procedure and the formulas for the

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ACCESSION NR: AP4043386

determination of the quantities of interest are taken from the book by A. R. Hippel (Dielectrics and Waves, N.Y., 1954). The data lead to the conclusion that the bandwidth properties of modulators which use the electro-optical effect in these crystals is limited to the centimeter wavelength band by the increase in thermal effect, which lead to breakdown of the crystals. Similar tests made on cubic crystals ($N_4(CH_2)_6$ and CuCl) show $N_4(CH_2)_6$ to be preferable for these purposes because they have a smaller loss angle in the millimeter band, and because the phase velocity of the light wave is equal to the phase velocity of the microwave. Orig. art. has: 2 tables.

ASSOCIATION: Institut kristalografii AN SSSR, Moscow (Institute of Crystallography, AN SSSR)

SUBMITTED: 24Jan64 ENCL: 02

SUB CODE: OP, SS NR REF SOV: 000 OTHER: 004

Card 2/4

ACCESSION NR: AP4043386

ENCLOSURE: 01

Values of ε and $\tan\delta$ for uniaxial crystals

Частота, гц	$NH_4H_2PO_4$			KH_2PO_4		
	$\varepsilon_{\parallel}$	$\varepsilon_{\perp}$	$tg\,\delta_{\parallel}$	$\varepsilon_{\parallel}$	$\varepsilon_{\perp}$	$tg\,\delta_{\parallel}$
	относительные значения					
10^2	16.0 ± 0.5	55.8 ± 1.5	0.1	21.8 ± 0.5	43.7 ± 1.5	0.06
10^3	15.9 ± 0.5	57.0 ± 1.5	0.065	21.3 ± 0.5	43.3 ± 1.5	0.008
10^4	15.5 ± 0.5	56.0 ± 1.5	0.018	20.8 ± 0.5	43.2 ± 1.5	0.002
10^5	15.3 ± 0.5	55.8 ± 1.5	0.005	20.1 ± 0.5	43.0 ± 1.5	0.0006
$9.8 \cdot 10^8$	15.0 ± 0.5	55.5 ± 1.5	0.005	20.0 ± 0.5	42.5 ± 1.5	0.0005
$9.4 \cdot 10^9$	14.7 ± 0.5	55.3 ± 1.5	0.041	19.7 ± 0.5	42.3 ± 1.5	0.0008
$3.96 \cdot 10^{10}$	14.0 ± 0.5	55.0 ± 1.5	0.08	19.6 ± 0.5	42.0 ± 1.5	0.003

1 - Frequency, cps, 2 - relative values

Card 3/4

ACCESSION NR:AP4043386 ENCLOSURE: 02

Values of ε and $\tan\delta$ for cubic crystals

Частота, гц	$N_4(CH_3)_6I$		$N_4(CH_3)_6I$		CoCl	
	ε	$tg\,\delta$	ε	$tg\,\delta$	ε	
	относительные значения					
10^2	2.5 ± 0.2	0.1	2.5 ± 0.2	0.1	10.0 ± 0.5	—
10^3	2.5 ± 0.2	0.065	2.5 ± 0.2	0.04	9.8 ± 0.5	—
10^4	2.5 ± 0.2	0.018	2.5 ± 0.2	0.011	9.2 ± 0.5	—
10^5	2.5 ± 0.2	0.005	2.5 ± 0.2	0.001	8.8 ± 0.5	—
$9.8 \cdot 10^8$	2.6 ± 0.2	0.005	2.6 ± 0.2	0.0008	8.6 ± 0.5	—
$9.4 \cdot 10^9$	2.6 ± 0.2	0.005	2.6 ± 0.2	0.0008	8.4 ± 0.5	—
$3.96 \cdot 10^{10}$	2.6 ± 0.2	0.005	2.6 ± 0.2	0.0008	8.3 ± 0.5	—

Card 4/4

L 16354-65 EWT(m)/EWP(t)/EWP(b) IJP(c)/ESD(t)/SSD/AFWL/RAEM(a)
JD

ACCESSION NR: AP5000686 S/0181/64/006/012/3727/3728

AUTHORS: Belyayev, L. M.; Dobrzhanskiy, G. F.; Pisarevskiy, Yu. V.; Cherny*shev, K. S.; Shaldin, Yu. V.

TITLE: Electro-optical properties of copper chloride and copper bromide crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1964, 3727-3728

TOPIC TAGS: electrooptical property, copper inorganic compound, refractive index

ABSTRACT: The authors measured the total electro-optical effect of copper chloride and copper bromide crystals, obtained from a melt and annealed. The experimental setup is shown in Fig. 1 of the enclosure. The samples were oriented by x-ray diffraction and by etch figures, with final orientation based on the maximum of the effect. The electrodes on the sample were sputtered in vacuum. The

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L 16354-65

ACCESSION NR: AP5000686

3

values obtained for the product of the cube of the refractive index and the electro-optical coefficient were found to be, at 525 and 675 nm respectively, 29 and 34 for CuCl and 22 and 26 for CuBr. The low values obtained for this product are probably due to the presence of stresses in the crystal and to inaccurate orientation. "The authors thank N. V. Glika and O. K. Mel'nikov for help in the orientation of the samples." Orig. art. has: 1 figure, 2 formulas, and 1 table.

ASSOCIATION: Institut kristallografii AN SSSR, Moscow (Institute of Crystallography AN SSSR)

SUBMITTED: 10Jul64 ENCL: 01

SUB CODE: OP, SS NR REF SOV: 000 OTHER: 002

Card 2/3

L 16354-65

ACCESSION NR: AP5000686 ENCLOSURE: 01

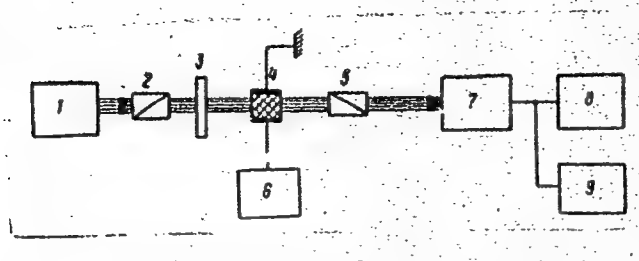

Fig. 1. Block diagram of setup for the measurement of the electro-optical effect.

1 - monochromator, 2 - polarizer, - 3 - quarter-wave plate, 4 - crystal sample, 5 - analyzer, 6 - high voltage source, 7 - photodetector, 8 - millivoltmeter, 9 - universal voltmeter

Card 3/3

L 38620-65 EWT(1)/EWT(m)/EPF(c)/EWP(j)/T/EEC(b)-2/EWA(c) Pc-4/Pr-4/Pi-4
IJP(c)/RPL GG/RM
ACCESSION NR: AP5005326 S/0181/65/007/002/0661/0663

AUTHOR: Pisarevskiy, Yu. V.; Tregubov, G. A.; Shaldin, Yu. V. 15 33 B

TITLE: Electro-optical properties of crystals of $NH_4H_2PO_4$, KH_2PO_4, and $N_4(CH_2)_6$ in microwave fields 21

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 661-663

TOPIC TAGS: Electrooptical effect, electrooptical constant, microwave field

ABSTRACT: It is shown first that at microwave frequencies the secondary effect connected with the change in the refractive index under mechanical deformations of the free crystal by the electric field is small, so that the primary effect can be measured directly. A block diagram of the set-up is shown in Fig. 1 of the Enclosure. The electro-optical coefficients were measured in cylindrical samples of $NH_4H_2PO_4$ and KH_2PO_4, the diameter of which was determined by the diameter of the internal conductor of the resonator. The optical axis of the crystal coincided with the geometrical axis of the cylinder along which the light beam was propagated. The values obtained for the electro-optical coefficient, for samples of different length along the optical axis, were 15.3 ± 4.5 and 25.5 ± 7.2 (x 10^{-8} CGSE)

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L 38620-65
ACCESSION NR: AP5005326

4

CGSE). Similar measurements for $N_4(CH_2)_6$ in the form of parallelepipeds of different dimensions yielded values (5—12) x 10^{-8} CGSE. In the crystal sample with minimum stress the value of the coefficient was 12 x 10^{-8}. The results obtained for $NH_4H_2PO_4$ and KH_2PO_4 agree within the limits of experimental accuracy with the results obtained for frequencies up to 1 Mc elsewhere. It is concluded that a change in the electro-optical constant can be expected above 10 Gc. In the case of $N_4(CH_2)_6$ it is expected that the electro-optical coefficient will remain constant up to 300 Gc. "The authors are deeply grateful to L. M. Belyayev and V. V. Nabatov for help with the work and G. S. Belikova for supplying the crystals." Orig. art. has: 2 figures.

ASSOCIATION: Institut kristallografii AN SSR, Moscow (Institute of Crystallography, AN SSSR)

SUBMITTED: 24Jun64 ENCL: 01 SUB CODE: SS, OP

NR REF SOV: 001 OTHER: 005

Card 3/3

L 6381-66 EWT(l)/EEC(k)-2/EWA(h)

ACC NR: AP5026761 SOURCE CODE: UR/0286/65/000/017/0040/0040

43

AUTHOR: Shaldin, Yu. V.

ORG: none

TITLE: A frequency drift meter for optical radiation. Class 21, No. 174268

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 40

TOPIC TAGS: optic measurement, frequency meter

25

ABSTRACT: This Author's Certificate introduces a frequency drift meter for optical radiation. The accuracy is improved and the measurement range is expanded by using a Faraday cell to compensate for rotation of the polarization plane of the radiation being studied in an optically active medium.

SUB CODE: OP,EC/ SUBM DATE: 08Jul63/ ORIG REF: 000/ OTH REF: 000

UDC: 621.317.361 : 621.375.8

Card 1/1

0901 1917

L 10306-66 EWT(1)/EEC(k)-2

ACC NR: AP6000026 SOURCE CODE: UR/0368/65/003/005/0463/0467

44,55 44,55 44,55 40 38 D

AUTHOR: Shaldin, Yu. V.; Pisarevskiy, Yu. V.; Mel'nikov, Yu. S.

ORG: None

TITLE: Measurement of the electro-optic effect in crystals 1M

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 5, 1965, 463-467

TOPIC TAGS: electrooptic effect, crystal optic property, measuring instrument

ABSTRACT: The best method available for the measurement of the electro-optic 21,44,55 effect in crystals is the method employing a $\lambda/4$ plate described elsewhere (O'B. R. Carpenter, JOSA, 40, 4, 225, 1950.). The problem of measuring the electro-optic coefficients may be simplified by the measurement of the voltage $U_{\lambda/2}$ which is required to establish a phase difference in $\lambda/2$, followed by a calculation of the electro-optic coefficients. The authors present a description of a set-up for the semiautomatic measurement of $U_{\lambda/2}$, together with a schematic diagram (Fig. 1). The method described makes it possible to shift from manual to automatic control. In conclusion authors express their deep gratitude to L. M. Belyayev 44,55

Card 1/2

UDC: 537.1

L 10306-66
ACC NR: AP6000026

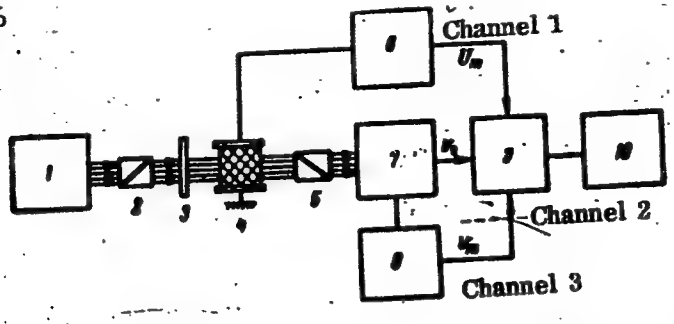


Fig. 1. Schematic diagram of a set-up for the measurement of voltage $U_{\pi/2}$, necessary for the creation of a phase difference in $\pi/2$ between an ordinary and an extraordinary waves in crystals: 1 - SPM-1 monochromator; 2 - polarizer; 3 - achromatic $\pi/4$ plate; 4 - specimen; 5 - analyzer; 6 - voltage generator; 7 - photodetector; 8 - ORION TT-1103 amplifier; 9 - BP-2 multiplier; 10 - indicator.

for a useful discussion. Orig. art. has: 2 figures and 26 formulas.

SUB CODE: 20, 14 / SUBM DATE: 16Dec64 / OTH REF: 002

Card 2/2

L 1774-66 EWA(k)/FBD/EWT(l)/EWP(e)/EWT(m)/EPF(c)/EEC(k)-2/EWP(i)/T/EWP(t)/EWP(k) EWP(b)/EWA(h)/EWA(m)-2 IJP(c) WG/JD/JW/JG/WH

ACCESSION NR: AP5024570 UR/0070/65/010/005/0767/0769 548.0:535.378

AUTHOR: Belyayev, L. M.; Nabatov, V. V.; Pisarevskiy, Yu. V.; Shaldin, Yu. V.

TITLE: Laser-induced triboluminescence in LiF crystals

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 767-769, and bottom half of insert facing p. 743

TOPIC TAGS: triboluminescence, laser beam, lithium fluoride, ruby laser

ABSTRACT: The disintegration of solid materials by intense light beams is reported. To demonstrate this, a ruby laser beam (λ = 6943 Å), focused by a lens with f = 40 mm on the center of an LiF crystal (average size 12.5 x 8.5 x 7.0 mm) with known triboluminescence properties, was used. The laser-induced triboluminescence was observed in LiF as one (filtered) line (λ = 3470 Å) by means of an FEU-42 photomultiplier. The laser- and tribo-pulses were registered on a DESO-1 oscillograph. A laser beam with a maximum density of 1.5 Mw/cm^2 concentrated on the crystal center caused a luminescence without disintegration, which was attributed to the heating of material at the lens focus. Crystal disintegration and the attendant triboluminescence were observed either after repeated bombardments by

Card 1/2

L 1774-66

ACCESSION NR: AP5024570

laser beams with a maximum density of 1.5 Mw/cm^2, or at higher densities. Although no surface cracks were observed at beam densities below 1.5 Mw/cm^2, their appearance at the subsurface in the form of "rosettes" was evidenced. The experiments showed that the intensity of triboluminescence was approximately two orders of magnitude greater than the luminescence due to heating at λ = 3470 Å. It was concluded that the occurrence of triboluminescence generated during the formation of internal cracks is independent of ambient pressure and is determined solely by the processes in the crystal and at its new surfaces. Further studies will be made to determine whether triboluminescence is due to the luminescence of excited atoms or discharge luminescence stimulated by the electron or to ion emission from new surfaces. Orig. art. has: 4 figures. [YK]

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR) 44,55

SUBMITTED: 24Feb65 ENCL: 00 SUB CODE: EC, SS

NO REF SOV: 003 OTHER: 001 ATD PRESS: 4111

Card 2/2

L 56480-65 EEO-2/EWT(d)/EEC-4/EEC(b)-2/EED-2 Pm-4/Pac-4

ACCESSION NR: AP5015818 UR/0109/65/010/006/1146/1146

621.378.1:621.376

AUTHOR: Yerkovich, S. P.; Pisarevskiy, Yu. V.; Ageshin, F. S.; Tregubov, G. A.; Shaldin, Yu. V.

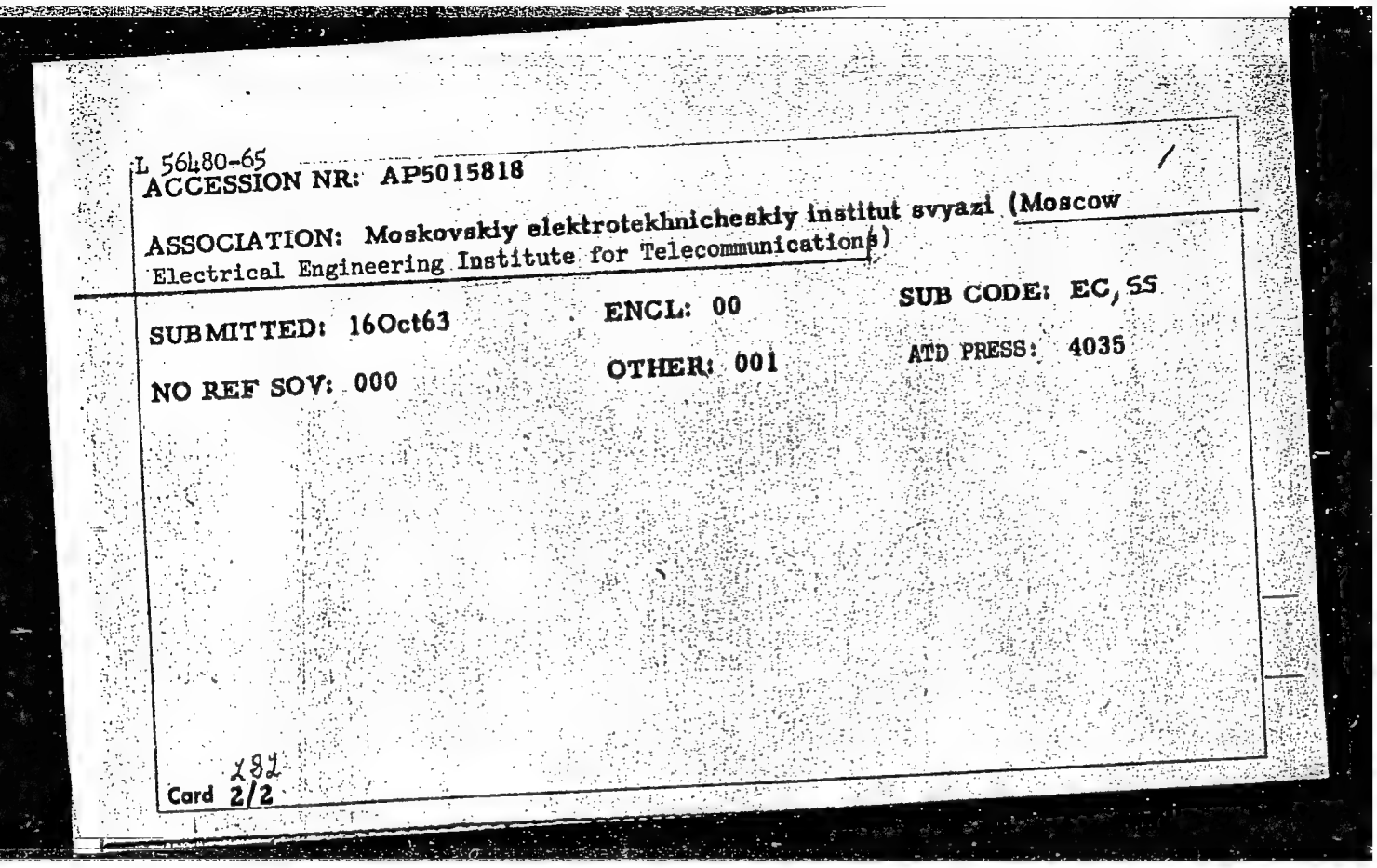
TITLE: Optical shf modulator

SOURCE: Radiotekhnika i elektronika, v. 10, no. 6, 1965, 1146

TOPIC TAGS: optical modulator

ABSTRACT: An experiment with modulation of light at 980 Mc is very briefly reported. The Pokels effect in single crystals of ammonium dihydrophosphate (ADP) and potassium dihydrophosphate (KDP) was used (B. H. Billings, J. Opt. Soc. Am., 1949, 39, 797). The modulation factor with the ADP crystal was 7.5% (output power, 2.5 w) without a constant-field bias. This was equivalent to 52% modulation with a quarter-wave plate and monochromatic light. The modulator bandwidth was 4 Mc. "The authors wish to thank G. F. Dobrzhanskiy for lending the DP crystals." Orig. art. has: 1 figure. [03]

Card 1/2



L 56480-65
ACCESSION NR: AP5015818

ASSOCIATION: Moskovskiy elektrotekhnicheskiy institut svyazi (Moscow Electrical Engineering Institute for Telecommunications)

SUBMITTED: 16Oct63 ENCL: 00 SUB CODE: EC, SS

NO REF SOV: 000 OTHER: 001 ATD PRESS: 4035

Card 2/2

SHALDIN, Yu.P., PODAREVSKIY, Yu.V., MEL'NIKOV, Yu.S.

Measurement of the electro-optical effect in crystals. Zhur. prikl. spektr. 3 no.5:463-467 N '65. (MIRA 18:11)

ACC NR: AP5027028 SOURCE CODE: UR/0120/65/000/005/0156/0158

AUTHOR: Pisarevskiy, Yu. V.; Tregubov, G. A.; Shaldin, Yu. V.

ORG: Institute of Crystallography of AN SSSR, Moscow (Institut kristallografii, AN SSSR)

TITLE: Measurement of electrooptical indices in the superhigh-frequency fields

SOURCE: Pribory i tekhnika eksperiment., no. 5, 1965, 156-158

TOPIC TAGS: electrooptic effect, light refraction, SHF

ABSTRACT: The method of measurement of the electrooptical index applied to various crystals is based on establishing the difference in behavior between ordinary and extraordinary waves. This difference is expressed by the formula $\gamma = (2\pi a/\lambda)\sigma n_0^3 r_{ij} E_0^{\alpha}$, where n_0 denotes index of refraction, λ wavelength, σ crystal factor, E_0 field strength, α and β are constants depending on the position of field vector and the direction of light with respect to crystal axes. An arrangement used for measuring the phase shift is shown in Fig. 1 (see Card 2/2). In order to improve the sensitivity, the audio-frequency of 830 cycles was used for the modulation of the superhigh frequency. The effect of modulation on the intensity of light is expressed in the form of Bessel functions. The audio-component of photocurrent is also determined and graphically

Card 1/2 UDC: 537.7-96:537.228.3

ZEZIN, A.B.; BAKEYEV, N.F.; MERZLOV, V.P.; SHALDINA, L.A.; KOZLOV, P.V.

Aggregation of molecules of poly-L-glutamic acid in aqueous solutions at low pH values. Biofizika 10 no.2:207-211 '65. (MIRA 18:7)

1. Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

SHALBUBA, M. Ye.

"Use of blood transfusions during a serious form of nuttaliosis in horses," In symposium: Nauch.-prakt raboty voyen-vet. sluzhby, Moscow, 1948, p. 73-75

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

MAGDA, I.I., professor, doktor; SHALDUGA, N.Ye., assistent; VOSKOBOYNIKOV, V.M., aspirant.

New method of rumenotomy. Sbor.trud.Khar'.vet.inst. 21:425-431 '52. (MLRA 9:12)

1. Kafedra operativnoy khirurgii Kharkovskogo veterinarnogo instituta.
(Veterinary surgery) (Stomach--Surgery)

SHALDUGA, N.Ye., assistent.

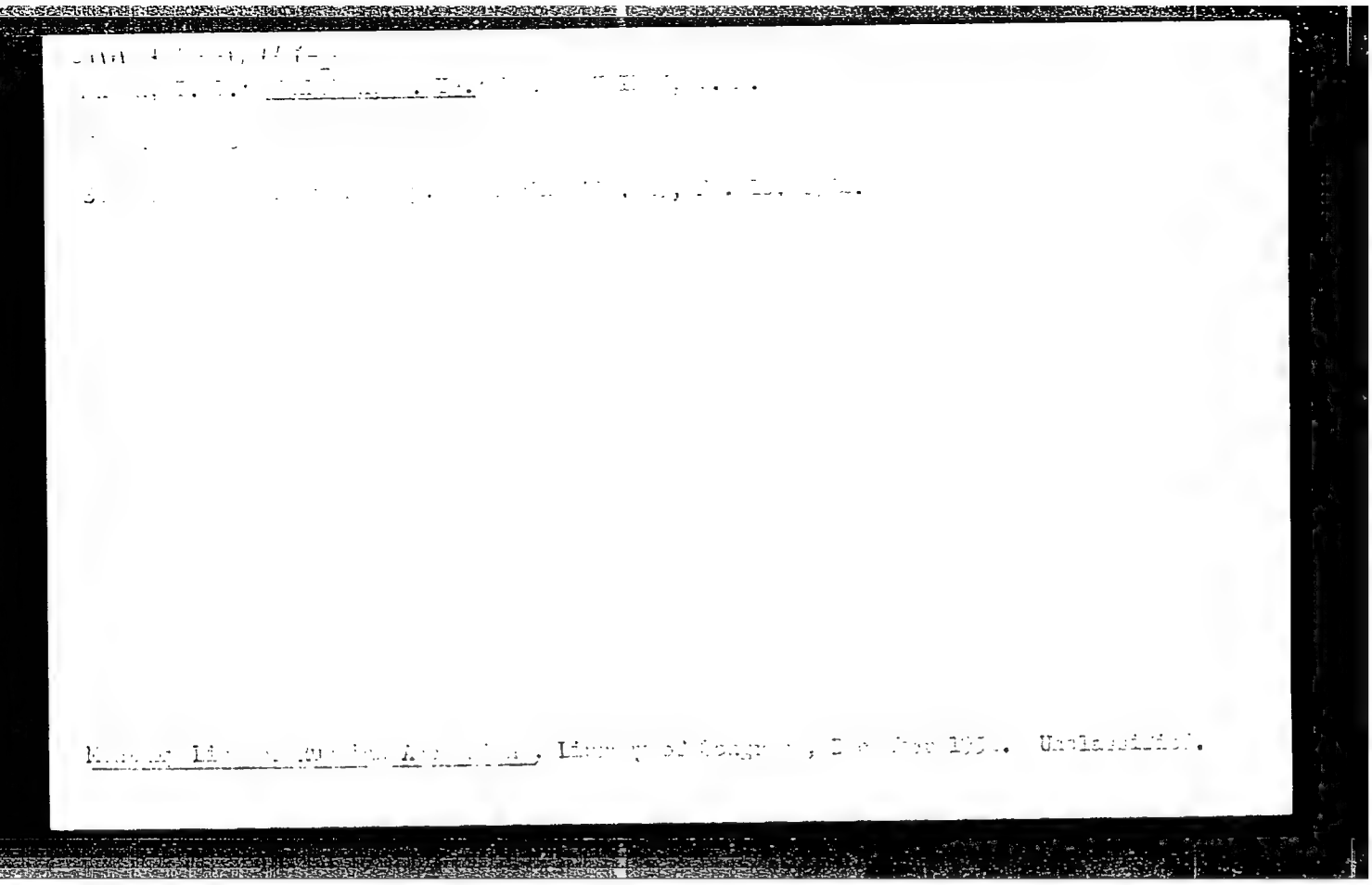
Caponizing cocks. Sbor.trud.Khar'.vet.inst. 21:453-465 '52.
(MLRA 9:12)

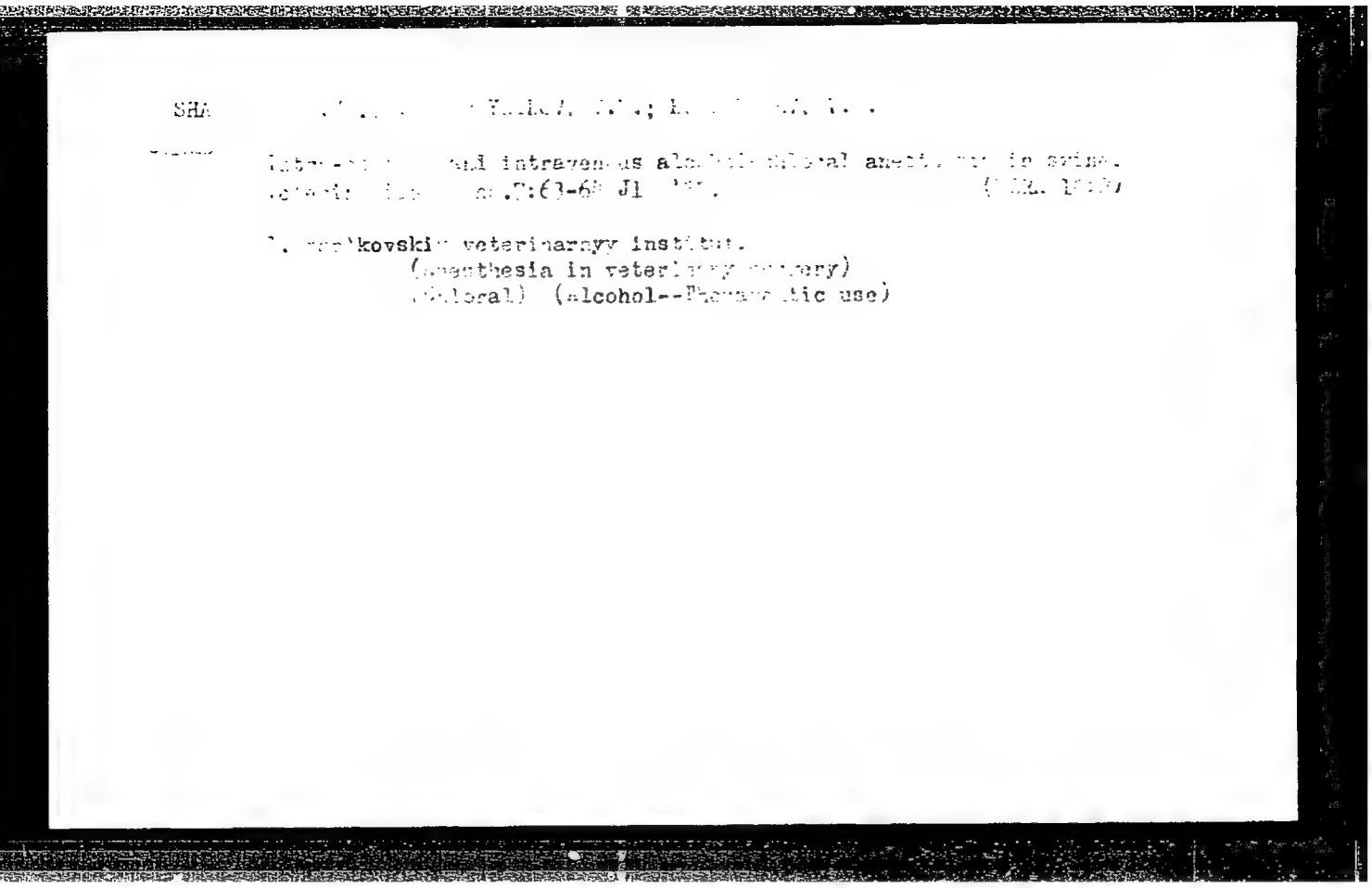
1. Kafedra operativnoy khirurgii Khar'kovskogo veterinarnogo instituta.
(Capons and caponizing)

KALASHNIK, I.A., dotsent; SHALDUGA, N.Ye.

Surgical treatment of umbilical hernia in swine and dogs. Sbor. trud.Khar'.vet.inst. 21:471-474 '52. (MLRA 9:12)

1. Kafedra operativnoy khirurgii Khar'kovskogo veterinarnogo instituta.
(Hernia) (Veterinary surgery)





SHA [illegible]

[illegible] intravenous alcoholic-chloral anesthesia in swine.
[illegible] 7:(3)-6[illegible] Jl '[illegible]. ([illegible])

[illegible]kovskiy veterinarnyy institut.
(Anesthesia in veterinary surgery)
(Chloral) (Alcohol--Pharmacologic use)

PUSTOVAR, Ya.P., dots.; SHALDUGA, N.Ye., dots.; KORZH, P.M., vetvrach.

Cancer of the eye region in cows. Veterinariia 35 no.4:57-62 Ap '58.
(MIRA 11:3)

1. Khar'kovskiy veterinarnyy institut.
(Eye--Cancer) (Cows--Diseases and pests)

SHALDUBA, [illegible], MAGDA, I. E. and KOZLOVOI, A. A.

"On the Use of the Surgical Method in Experimental Helminthology."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Helminthological Laboratory of the USSR Academy of Sciences, Moscow

[illegible], Decd

"The treatment of cow pathology of ovaries."

Veterinariya Vol. 37, No. 3, 1960, p. 46

Khar'kov- Vet Inst

SHALDUGA, N. E. Assistant Professor, Khar'kov Veterinary Institute.

"An addition to the question of restoring ovary regeneration in cows, rabbits (Leporidae) and hens," Veterinariya, Vol. 37, No. 12, p. 49, 1960.

SHALDUGA, N.Ye., dotsent

Reparative regeneration of ovaries in cows, female rabbits, and chickens. Veterinariia 37 no.12:49-51 D '60. (MIRA 15:4)

1. Khar'kovskiy veterinarnyy institut.
(Ovariotomy) (Veterinary surgery) (Regeneration (Biology))

MAGDA, I.I.; MOZGOVOY, A.A.; SHALDUGA, N.Ye.

Using a surgical method in experimental helminthology. Trudy Gel'm.lab. 11:162-165 '61. (MIRA 15:12)
(Helminthological research)

MOZGOVOY, A.A.; MAGDA, I.I.; SHALDUGA, N.Ye.

Epizootiology of ascariasis in poultry. Trudy Gel'm.lab. 11:166-168 '61. (MIRA 15:12)
(Ascarids and ascariasis) (Parasites--Poultry)

MOZGOVOY, A.A.; MAGDA, I.I.; SHALDUGA, N.Ye.; ALEKSANDRYUK, S.P.

Experimental investigation of abnormal localization of ascarids. Trudy Gel'm.lab. 11:169-179 '61. (MIRA 15:12)
(Ascarids and ascariasis)

SHALDUGA, N.Ye., dotsent

Treatment of cows with diseased ovaries. Veterinariia 37 no.3: 46-51 Mr '60. (MIRA 16:6)

1. Khar'kovskiy veterinarnyy institut.
(Ovaries--Diseases) (Veterinary medicine)

SHALDUN, T.N.

Metamorphic characteristics of lead-zinc ores with a high pyrite content in the Tekeli deposit. Geol. rud. mestorozh. no.5:39-56 S-O '59. (MIRA 13:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR.
(Dzungarian Ala-Tau--Ore deposits)

USSR/Zoological Parasitology - Parasitic Worms. Helminthes. G.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 48212

Author : Shaldybin, L.S.

Inst : Gor'ki State Pediatric Institute.

Title : Materials for the Epizootology of Some Helminthes in a Moose.

Orig Pub : Uch. zap. Gor'kovsk. gos. ped. in-ta, 1957, 19, 57-63.

Abstract : By the method of coprological analysis, according to Vitsel'-Orlov, and by animal dissections, in the territory of the Mordovsk game reservation, an intense infestation by Elaphostrongylus panticola Lubimov, 1946, was found in the spotted deer (up to 83%), in the moose (up to 82%) and in the Siberia stag (up to 87%). Mullerlike larvae of the parasite were detected in the large intestine, in the washing of the heart and, in the imago stage, in the brain

Card 1/2

USSR/Zoological Parasitology - Parasitic Worms. Helminthes. G.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 48208

illustrations are provided). The majority of detected helminthes infest also the ruminants or the fur animals.

Card 2/2

SHALDYBIN, L.S.

Barsa-Kel'mes Preserve. Uch.zap.GGPI 20:147-156 '58.
(MIRA 13:6)

(Barsa-Kel'mes Preserve)

SHALDYBIN, L.S.

Parasitic worms of the long-eared hedgehog from the Island of Barsa-Kelmes. Uch.zap.GGPI no.27:58-72 '60. (MIRA 15:3)
(Barsa-Kel'mes, Island—Parasites—Hedgehogs)
(Worms, Intestinal and parasitic)

SHALDYBIN, L.S.

Cestodes of the genus Cyrocoelja. Uch.zap.GGPI no.27:73-80 '60. (MIRA 15:3)
(Barsa-Kel'mes, Island--Cestoda)

SHALDYBIN, L.S.; CHANAYEVA, V.S.

Material on the helminths of rodents in the Black Sea Preserve.
Uch.zap.GGPI no.27:81-96 '60. (MIRA 15:3)
(Black Sea Preserve--Parasites--Rodentia)
(Worms, Intestinal and parasitic)

SHALDYBIN, L.S.

Helminthologic characteristics of muskrat. Uch.zap.GGPI no.27:97-101 '60. (MIRA 15:3)

(Parasites--Muskrats) (Taenia)

SHALDYBIN, L.S.

Helminths of mammals of the Mordvinian State Preserve. Uch. zap. GGPI 48:52-81 '64.

Analysis of the composition of parasitic worms of the brown rat (Rattus norvegicus) living in the Soviet Union. Ibid.:82-90 (MIRA 18:4)

SHALIMOVA, Yu. S.

ZARAZHAYEMOST' RAZLICHNYKH VIDOV ORIBATID I ROL' IKH V EPIZOOTOLOGII MONIYEZIOZA NA PASTBISHCHAKH GOR'KOVSKOY OBLASTI. "Works on Helminthology" on the 75th Birthday of K. I. SKRYABIN, IZDAT. AKAD. NAUK, SSSR, 1953, page 240
Gor'kiy State Pedagogical Inst.

SHALDYBINA, Ye.S.

Vertical migrations of oribatid mites [with English summary in insert]. Zool.zhur. 35 no.4:535-545 Ap '56. (MLRA 9:8)

1. Kafedra zoologii Gor'kovskogo pedagogicheskogo instituta.
(Mites)

USSR G

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No 99602

Author : Shaldybina, Ye.S.
Inst : Gor'liy State Pedagogical Institute.
Title : Effect of Innundation Upon the Population of Oribatei Mites

Orig Pub : Uch.zap.Gor'kovsk.gos.ped.in-t,1957,19,101-105.

Abstract : Excessive humidity has a negative effect upon the development of mites (M) and leads to their death which is of great importance in the spread of helminthic infestations on periodically innundated sectors. Investigations were carried out under field and laboratory conditions. For the field investigation, a sector was chosen which, periodically, in the course of the summer, was covered with water, and only in September, became dry. Maximal number of M in that sector was observed in the middle of May, following which their number continuously decreased and reached a minimum in September, after which a new

Card 1/2

USSR G

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No 99602

increase began. In the laboratory the experiments were carried out on 2 species: Scheloribates laevigatus from the dry sector and Platynothrus peltifer predominating in the humid sectors. The M perished under conditions of rapid drying but, when submitted to gradual change of the medium, they survived. Similar experiments were carried out with freezing. M immersed for 36 days in frozen water and then submitted to gradual heating gave a 60% viability. M not immersed in water, but floating, did not perish at at all. Various species of M react in a different manner to innundation. Pl.Peltifer perished within 30 days and only to the extent of 60%, and Sch.laevigatus perished completely on the 16th day. It was confirmed by the experiments that M can survive on pastures with periodical innundations and frosts.--Ye.N.Bulahova-Zakhvatkina.

Card 2/2

USSR / Zooparasitology. Acarids and Insects as Disease Vectors. G
Acarids.

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No 99598